12AT7

12AT7
HIGH-MU TWIN TRIODE
9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Heater Arrangement	*Series*	*Parallel*	
Voltage	12.6	6.3	ac or dc volts
Current	0.15	0.3	amp

Direct Interelectrode Capacitances (Approx.)°: ←

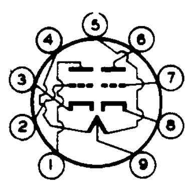
	Unit No. 1	*Unit No. 2*	
Grid-Drive Operation:			
Grid to Plate	1.5	1.5	μμf
Grid to Cathode	2.2	2.2	μμf
Plate to Cathode	0.5	0.4	μμf
Heater to Cathode	2.4	2.4	μμf
Cathode-Drive Operation:			
Plate to Cathode	0.2	0.2	μμf
Grid & Heater to Cathode	4.6	4.6	μμf
Grid & Heater to Plate	1.8	1.8	μμf
Grid to Grid	0.005 max.		μμf
Plate to Plate	0.4 max.		μμf

° With no external shield.

Mechanical:

Mounting Position	Any
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" ± 3/32"
Maximum Diameter	7/8"
Bulb	T-6-1/2"
Base	Small-Button Noval 9 Pin (JETEC No.E9-1)
Basing Designation for BOTTOM VIEW	9A

Pin 1 - Plate of Unit No.2
Pin 2 - Grid of Unit No.2
Pin 3 - Cathode of Unit No.2
Pin 4 - Heater
Pin 5 - Heater



Pin 6 - Plate of Unit No.1
Pin 7 - Grid of Unit No.1
Pin 8 - Cathode of Unit No.1
Pin 9 - Heater Center-Tap

AMPLIFIER - Class A_1

Values are for each unit

Maximum Ratings, *Design-Center Values:*

PLATE VOLTAGE	300 max.	volts ←
GRID VOLTAGE:		
Negative Bias Value	-50 max.	volts
PLATE DISSIPATION	2.5 max.	watts

← Indicates a change

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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode . .	90 max.	volts
Heater positive with respect to cathode . .	90 max.	volts

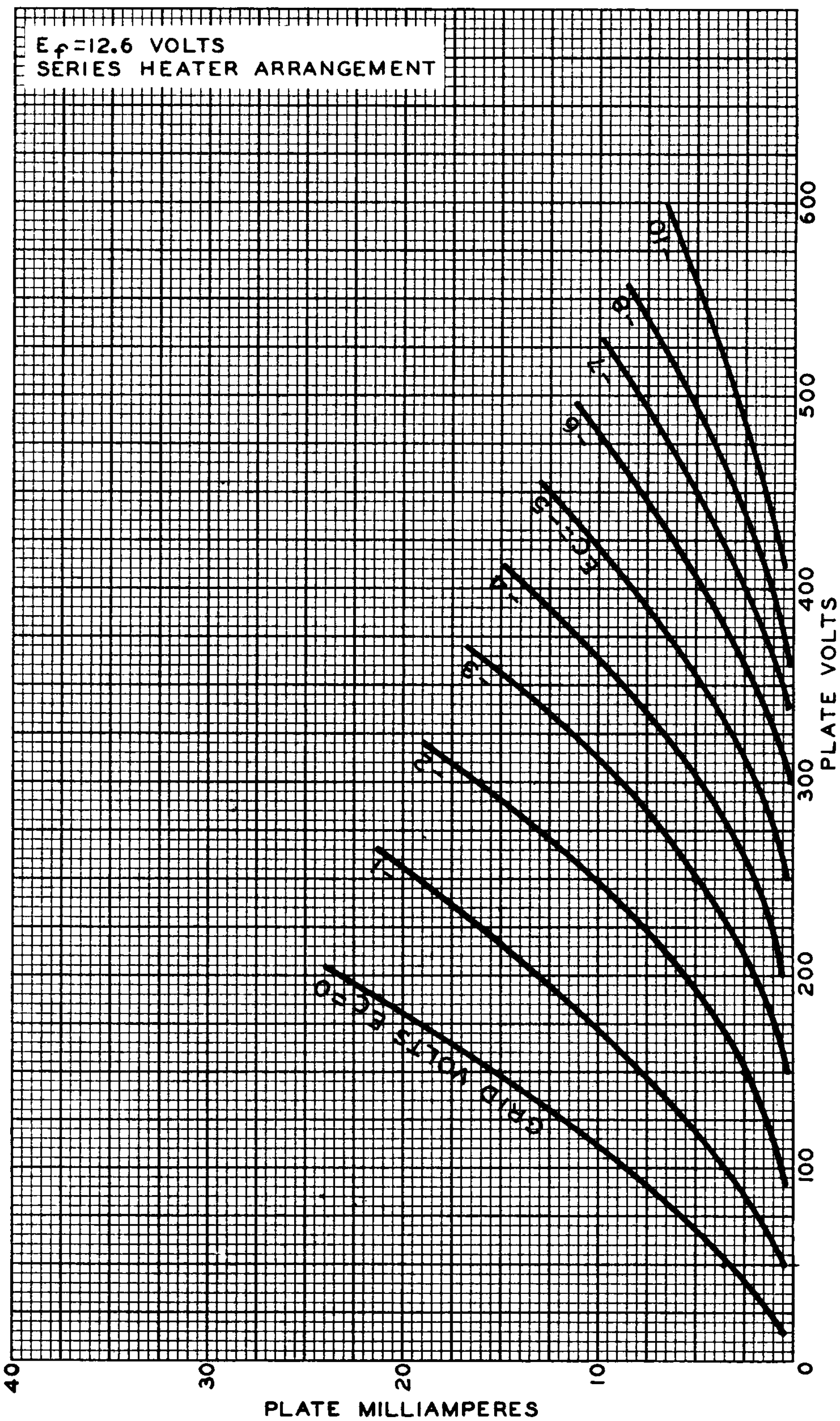
→ **Characteristics:**

Plate Supply Voltage	100	250	volts
Cathode-Bias Resistor	270	200	ohms
Amplification Factor	60	60	
Plate Resistance (Approx.)	15000	10900	ohms
Transconductance	4000	5500	μmhos
Grid Voltage (Approx.) for plate current of 10 μamp . .	-5	-12	volts
Plate Current	3.7	10	ma

→ Indicates a change

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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AVERAGE PLATE CHARACTERISTICS
EACH UNIT



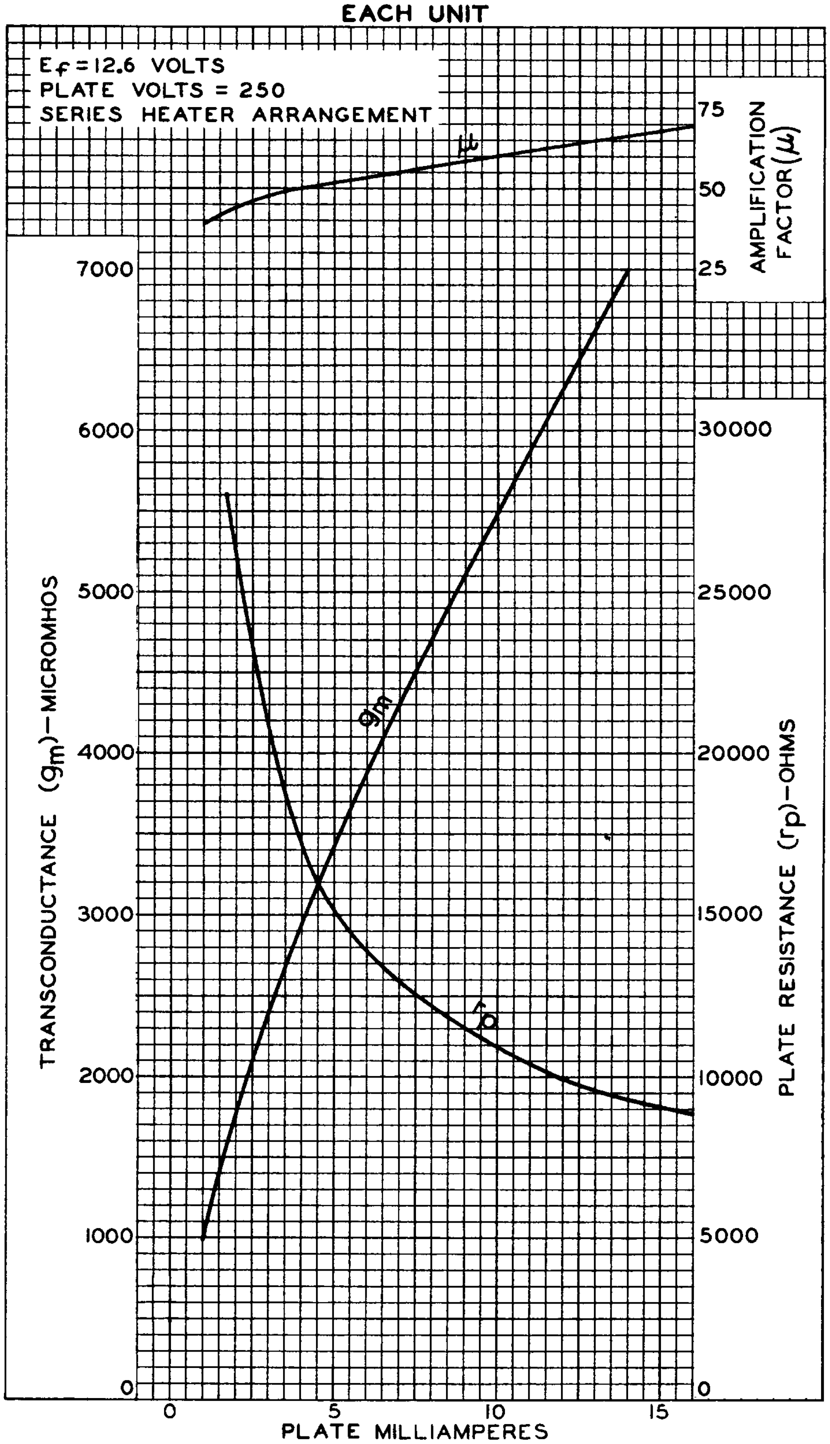
92CM-7056

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AVERAGE CHARACTERISTICS

EACH UNIT



ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9314